UNMANNED AIRCRAFT SYSTEMS

High-Quality Instructional Materials Review Rubric

Grade Range: 9-12

Evaluator				Rating Committe	9	
Publisher						
Title of Textb	ook Series/Instructional Program					
Grade Range of Textbook Series/Instructional Program				Specific Grade Evaluated		
Publisher in	ndicated curriculum type:	Compr	rehensive Cu	rriculum [Complementary Cur	riculum

This evaluation rubric is designed to assess how well instructional materials align with the <u>Mississippi College- and Career-Readiness Standards (MCCRS) for Unmanned Aircraft Systems</u>, as well as other criteria for high-quality instructional materials within the Digital Technology Career Cluster. The rubric includes key considerations for evaluating high-quality instructional materials and outlines three Gateways for assessment. For each Gateway, Criterion and related Indicators are provided, along with Guiding/Key questions and Evidence.



The evaluation rubric is designed to allow reviewers to determine a threshold for quality for each gateway. Remember to focus on what is present in the instructional materials and any ancillary or complementary resources rather than what might be inferred. All scores should be based on evidence observed from the instructional materials themselves.



Scoring Protocol and Criteria:

- **No evidence (0):** No correlation between the standards and lessons, a logical sequence of content cannot be identified, and/or there appear to be significant content inaccuracies, essential understandings, knowledge, or skills are not addressed, and opportunities to practice essential skills are omitted.
- **Limited (1 or 2):** Limited connections between the standards and the lessons are noted, content appears to contain some inaccuracies or is not always clear, essential understandings, knowledge, or skills are not sufficiently addressed, and there is limited opportunity for students to practice essential skills.
- Adequate (2 or 4): Lessons are aligned with the standards, the content appears accurate and clear, and the lessons are in sequential order. Most of the essential understandings, knowledge, and skills are supported, and many opportunities are provided for students to practice essential skills.

The High-Quality Instructional Materials Review Rubric is comprised of three sections:

Gateway 1: Alignment to Standards - This is a requirement for submission.

→ Advance to Gateway 2 only if Gateway 1 scores at least 10 points.

Gateway 2: Rigor and Instructional Practices - This is a requirement for submission.

→ Advance to Gateway 3 only if Gateway 2 scores at least **9 points**.

Gateway 3: Usability

GATEWAY 1

Alignment to Standards - This is a requirement for submission.

High-quality digital technology materials are coherent and aligned to the *MCCRS for Unmanned Aircraft Systems* to support critical thinking, teamwork, and problem-solving skills. To determine the Gateway rating, educators use evidence from the instructional materials to score indicators related to each criterion.

- Criterion 1.1 (1a 1d): Alignment and Accuracy 10 possible points
 Materials adequately address the MCCRS for Unmanned Aircraft Systems.
- Criterion 1.2 (1e 1g): Learning Progressions and Coherence 8 possible points
 The materials attend to the learning progressions emphasized in the standards, so the curriculum is coherent both within grades and across grade bands and is coherent and consistent with the progressions in the MCCRS for Unmanned Aircraft Systems.

Criterion 1.1: ALIGNMENT AND ACCURACY				
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE	
COMPREHENSIVE CURRICULUM: 1a. Materials align with the Unmanned Aircraft Systems curriculum listed in the Digital Technology Career Cluster. (4 points)	 Does each lesson show the specific standards that are addressed in the materials? Have all aspects or part of the standards been addressed? Does the lesson thoroughly address the content of the standards? Is complexity evident in the materials? 	 Address grade-level or content- appropriate standards Ensure students reach grade-level proficiency while engaging in the CTE program 	0 2 4	
COMPLEMENTARY CURRICULUM: 1a. Materials align with at least 50 percent of the Unmanned Aircraft Systems curriculum listed in the Digital Technology Career Cluster. (4 points)	 Does at least 50% of the lessons show the specific standards that are addressed in the materials? Are at least 50% of the aspects or part of the standards been addressed? Does the lesson thoroughly address the content of the standards? Is complexity evident in the materials? 	 Address grade-level or content- appropriate standards Ensure students reach grade-level proficiency while engaging in the CTE program 	0 2 4	

1b. Materials align to research-based instructional practices associated with Digital Technology. (2 points)	Do the materials align to research-based instructional practices?	 Identify and reference research-based strategies that are use in the material's design 	0 1 2
1c. Materials connect content to real-world application in meaningful ways throughout the year. (2 points)	Are materials designed so that students and teachers work with engaging, relevant, real-world applications of the CTE program?	 Focus on contemporary advancements in the CTE field Provide opportunities for students to learn from relevant case studies that examine real-world scenarios Student will explore and conduct an indepth analysis of contemporary issues, aiming to provide comprehensive insights to current challenges, complexities, and invocative solutions within the field 	0 1 2
1d. Materials include of a mixture of instructional strategies (e.g., discussions, modeling, student activities, projects, etc.). (2 points)	Do materials allow for a variety of instructional strategies within the lessons and across the curriculum?	Provide opportunities for students to show learning through a variety of instructional strategies	0 1 2
		TOTAL SCORE CRITERION 1.1	

Criterion 1.2: LEARNING PROGRESSIONS and COHERENCE

INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
1e. Materials provide a coherent sequence or collection of activities and texts that build content knowledge, vocabulary, and skills. (2 points)	• Is the amount of time for content and skills explicitly identified and coherent?	Create an intentional sequence	0 1 2
1f. Materials make connections to technology or career implementation skills covered in past lessons, allowing students to connect new learning with past knowledge. (2 points)	 Are past topics and lessons referenced as new concepts are added? 	Integrate previous learning	0 1 2

Meets: 8-10 points | Partially Meets: 6-7 points | Does Not Meet: 0-5 points

1g. Materials provide scaffolding or opportunities for decreased educator support over time to promote student proficiency and independence with targeted technology or career skills. (2 points)	Is scaffolding present to promote understanding and independence in learners?		0 1 2
1h. Content is appropriate to the grade-level and considers students' prior knowledge to incorporate this knowledge into the lesson and/or cover material not previously covered. (2 points)	 Is content grade-level appropriate? Does content build upon skills students should know from previous lessons? 	Provide opportunities for students to build vertical content knowledge by accessing prior knowledge and understanding of concept	0 1 2
	Meets: 7-8 points Partially Meets	TOTAL SCORE CRITERION 1.2 : 5-6 points Does Not Meet: 0-4 points	

Gateway 1 Points AVAILABLE	Gateway 1 Points ACHIEVED	GATEWAY 1 RATING
		Meets (score of 15-18 points) PROCEED TO GATEWAY 2
18		Partially Meets (score of 10-14 points) PROCEED TO GATEWAY 2
	Sum of points from Criterion 1.1 and 1.2	☐ Does Not Meet (score of 0-9 points) STOP REVIEW

GATEWAY 2

Rigor and Instructional Practices - This is a requirement for submission.

Gateway 2 examines how materials support students in meeting the rigorous standards in the digital technology framework.

- Criterion 2.1 (2a 2c): Student Learning 8 possible points

 Materials outline how they are designed to support each student's regular and active participation in grade-level/grade band/series content.
- Criterion 2.2 (2d 2g): Instructional Design 8 possible points

 Materials align with student-centered practices and allow opportunities for students to explore content.

Criterion 2.1: STUDENT LEARNING				
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE	
2a. Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners. (4 points)	 Do materials provide teachers with strategies for meeting a range of learner needs? Provides extra support for students working below grade level. Provides extensions for students with high interest or working above grade level. 	 Provide specific strategies and supporting for differentiating instruction. Provide a comprehensive strategic support system for students to maintain consistent and active involvement in their learning. 	0 2 4	
2b. Materials within each lesson provide multiple representations by adapting for a variety of different types of learners using alternatives to reading, writing, listening, and speaking such as translations, pictures, or graphic organizers. (2 points)	Do materials provide multiple representations for different types of learners?	 Provide tasks with multiple entry points. Use a variety of representations to engage students with grade-level or course-level content. Include activities that utilize visuals to establish necessary background knowledge on new or unfamiliar themes or topics in an appropriate manner. 	0 1 2	
2c. Assessment methods are varied, making them accessible to all students and do not penalize or reward students due to exceptionalities. (2 points)	 Are assessment methods varied to all accessibility for all types of students? 	 Provide resources (e.g., sample student responses, rubrics, scoring guidelines, and open-ended feedback) for scoring purposes. 	0 1 2	

 Is guidance consistently provided to teachers on how to interpret student understandings? 	 Provide guidance to teachers to interpret student understanding. Provide opportunities for students to show learning through annotated drawings, classroom observations, oral responses, and presentations, use of glossaries and home language, performance assessments, and portfolios. 	

TOTAL SCORE CRITERION 2.1

Meets: 7-8 points | Partially Meets: 5-6 points | Does Not Meet: 0-4 points

Criterion 2.2 INSTRUCTIONAL DESIGN

INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
2d. Materials include a mixture of instructional strategies (i.e., discussions, modeling, student activities, projects). (2 points)	Do materials allow for a variety of instructional strategies within the lessons and across the curriculum?	Leverage the use of a variety of formats and methods over time to deepen student understanding and ability to explain and apply content concepts.	0 1 2
2e. Students are provided with opportunities to work collaboratively. (2 points)	Do the materials include activities that allow students to work collaboratively?	Support collaboration between teacher to student or student to student.	0 1 2
2f. Students are provided with opportunities to explore and provide solutions to open-ended prompts, connect content with real-world applications, and reflect on their learning. (2 points)	Are students provided with opportunities to explore open-ended prompts and reflect on their own learning?	 Provide opportunities for students to learn from relevant information that examine real-world scenarios. Students will explore and conduct indepth analysis of contemporary issues, aiming to provide comprehensive insights into current challenges, complexities, and innovation solutions within the field. 	0 1 2
2g. Students are provided with exposure to career opportunities and pathways related to multimedia. (2 points)	Do the materials provide students with ideas of career opportunities in technology fields?		0 1 2

TOTAL SCORE CRITERION 2.2

Meets: 7-8 points | Partially Meets: 5-6 points | Does Not Meet: 0-4 points

Gateway 2 Points AVAILABLE	Gateway 2 Points ACHIEVED	GATEWAY 2 RATING
		Meets (score of 14-16 points) PROCEED TO GATEWAY 2
16		☐ Partially Meets (score of 9-13 points) PROCEED TO GATEWAY 2
	Sum of points from Criterion 2.1 and 2.2	☐ Does Not Meet (score of 0-8 points) STOP REVIEW

GATEWAY 3

Usability

The materials support teachers in fully utilizing the curriculum, understanding their students' skills and learning, and supporting a range of learners. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- Criterion 3.1 (3a 3d): Teacher Supports 8 possible points
 Materials include resources for teachers to plan and implement materials with integrity effectively and to develop their professional learning further.
- Criterion 3.2 (3e 3h): Assessment 12 possible points
 Materials includes a system of assessments that identify how materials provide tools, guidance, and support for teachers to collect, interpret, and act on data about student progress toward the standards.
- Criterion 3.3 (3i 3q): Student Supports 18 possible points
 Materials are designed for students' regular and active participation in grade-level/grade-band/series content.
- Criterion 3.4 (3r 3u): Intentional Design 8 possible points

 Materials are visually engaging and reference or integrate digital technology (when applicable), with teacher guidance.

Criterion 3.1: TEACHER SUPPORTS				
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE	
3a. Materials provide teacher guidance with useful annotations and suggestions for how to enact the student materials and ancillary materials, with specific attention to engaging students to guide their development. (2 points)	Do the materials offer comprehensive guidance, including detailed annotations and actionable suggestions, to assist teachers in implementing both student and ancillary materials, specifically focusing on engaging students to facilitate their developmental progress?	 Provide overview sections, annotations, narrative information or other documents that will assist the teacher in planning instruction, including strategies and guidance for presenting the content. Include guidance on identifying and addressing student errors and misconceptions in the planning phase. Contain adult-level explanations and examples of the more complex gradelevel or course-level concepts and 	0 1 2	

	concepts beyond the current course to that teachers can improve their own knowledge of the subject.	
 Do the materials include standards correlation information, including college- and career-ready or career- technical based standards, that explains the role of the standards in the context of the overall series? 		0 1 2
Do the materials provide strategies for informing all stakeholders, including students, parents, or caregivers about the program and suggestions for how they can help support student progress and achievement?	 Contain strategies for informing students, parents, and/or caregivers about the technology and computer science their student is learning. Provide forms of communication with parents and caregivers, including for families that may speak and read in a language other than English. Contain suggestions for how parents or caregivers can support student progress and achievement. 	0 1 2
 Does the curriculum provide a comprehensive list of required materials/supplies needed to support instructional materials? 	Provide a comprehensive list of all digital and print materials needed to complete the instructional activities.	0 1 2
Meets: 7-8 points Partially Meets	TOTAL SCORE CRITERION 3.1 : 5-6 points Does Not Meet: 0-4 points	
GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
 Do the standards correlations or assessment guidance documents indicate if all standards for the content area are assessed by the end of the year? 		0 1 2
	correlation information, including college- and career-ready or career-technical based standards, that explains the role of the standards in the context of the overall series? • Do the materials provide strategies for informing all stakeholders, including students, parents, or caregivers about the program and suggestions for how they can help support student progress and achievement? • Does the curriculum provide a comprehensive list of required materials/supplies needed to support instructional materials? Meets: 7-8 points Partially Meets GUIDING QUESTIONS • Do the standards correlations or assessment guidance documents indicate if all standards for the content area are	that teachers can improve their own knowledge of the subject. Do the materials include standards correlation information, including college- and career-ready or career-technical based standards, that explains the role of the standards in the context of the overall series? Do the materials provide strategies for informing all stakeholders, including students, parents, or caregivers about the technology and computer science their student is learning. Provide forms of communication with parents and caregivers, including for families that may speak and read in a language other than English. Contain suggestions for how parents or caregivers can support student progress and achievement. Does the curriculum provide a comprehensive list of required materials/supplies needed to support instructional materials? TOTAL SCORE CRITERION 3.1 Meets: 7-8 points Partially Meets: 5-6 points Does Not Meet: 0-4 points GUIDING QUESTIONS EVIDENCE OF HOW THE MATERIALS

3f. Assessment system provides multiple opportunities throughout the grade, course, and/or series to determine students' learning and sufficient guidance to teachers for interpreting student performance and suggestions for follow-up. (4 points)	 Do the materials include multiple types of formative and summative assessments? Does the assessment system provide sufficient guidance to teachers for interpreting student performance and suggestions for follow-up? Is guidance consistently provided to teachers on how to interpret student understandings? 	 Provide resources (e.g., sample student responses, rubrics, scoring guidelines, and open-ended feedback) for scoring purposes. Provide guidance to teachers to interpret student understanding. Provide teachers guidance to respond to student needs elicited by the assessment. Provide opportunities for students to show learning through annotated drawings, classroom observations, oral responses, and presentations, use of glossaries and home language, performance assessments, and portfolios. 	0 2 4
3g. Assessments include opportunities for students to demonstrate the full intent of grade-level/course-level standards and practices across the series. (4 points)	 Do the assessments include a variety of modalities (e.g., writing, illustrating, demonstrating, modeling, oral presentations, and performance tasks) and how are they used across different assessments? Do the assessment tasks incorporate sufficient complexity to assess the depth of the performance expectations? 	 Provide opportunities for different types of modalities (e.g., writing, illustrating, demonstrating, modeling, oral presentations, and performance tasks). Provide opportunities for different types of items used for student assessments and how they are used to measure student performance (e.g., performance tasks, discussion questions, constructed response questions, project- or problem- based tasks, portfolios, justified multiple-choice). 	0 2 4
3h. Assessments offer accommodations that allow students to demonstrate their knowledge and skills without changing the content of the assessment. (2 points)	 Do materials incorporate accommodations in assessments that maintain the assessment's content while enabling students to demonstrate their knowledge and skills effectively? Is guidance provided for teachers to 	Describe where and how accommodations are offered that ensure all students can access the assessment, (e.g., text-to-speech, increased font size, etc.) without changing the content of the assessment.	0 1 2

use the accommodations?	Provide guidance for teachers to accommodate students, including those in special populations, without altering grade-level or course expectations or the content of the assessment.	
	TOTAL SCORE CRITERION 3.2	

Meets: 10-12 points | Partially Meets: 7-9 points | Does Not Meet: 0-6 points

Criterion 3.3: STUDENT SUPPORTS

INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
3i. Materials provide strategies and supports for students in special populations to support their regular and active participation in Unmanned Aircraft Systems . (2 points)	 Do materials provide differentiation supports to sufficiently engage students? Do the materials include overarching guidance on strategies and accommodations for special populations? 	 Describe where and how accommodations are offered that ensure all students can access the materials, (e.g., text-to-speech, increased font size, etc.) without changing the content of the materials. Provide guidance for teachers to accommodate students without altering grade-level or course expectations. 	0 1 2
3j. Materials provide extensions and/or opportunities for students to engage with Unmanned Aircraft Systems at higher levels of complexity. (2 points)	What opportunities do students have to develop and apply higher-level thinking?	 Suggest strategies and supports for students' exploration of grade-level or course-level content at a higher level of complexity, not students completing additional tasks, but as an extension of their learning. Provide opportunities for students to develop and apply higher-level thinking. 	0 1 2
3k. Materials provide varied approaches to learning tasks over time and variety in how students are expected to demonstrate their learning with opportunities for students to monitor their learning. (2 points)	 What approaches to presentation of material are provided? What approaches are provided for students to demonstrate and monitor their learning? 	Provide opportunities for students to share their thinking, demonstrate changes in their thinking over time, and apply their understanding in new contexts.	0 1 2

	Do the approaches to presentation and demonstration of learning vary over the course of the year?	 Leverage the use of a variety of formats and methods over time to deepen student understanding and ability to explain and apply content concepts. Provide opportunities for students to monitor and deepen their own learning, using ongoing review, either oral or written feedback, practice, and self-reflection. 	
3I. Materials provide opportunities for teachers to use a variety of grouping strategies. (2 points)	How and where do the materials provide guidance for the teacher on how and when to use specific grouping strategies?	 Describe for the teacher how and where to group students in a variety of grouping formats. Provide for meaningful interaction among students, such as in large or small groups, pairs, etc. 	0 1 2
3m. Materials provide strategies and supports for students who read, write, and/or speak in a language other than English to regularly participate in learning. (2 points)	Where do materials provide appropriate support, and accommodations for EL students that will support their regular and active participation in learning?	 Provide strategies and opportunities for speaking, listening, reading, and writing to develop practices and knowledge of the subject matter, including scaffolding up to and within gradelevel or course-level work. Provide teacher guidance to support EL students. Provide guidance that help teachers identify and follow up on whether the student has challenges in content vs. language acquisition, as well as identify when students may have misconceptions about content vs. language demand, to ensure the two are not conflated. 	0 1 2
3n. Materials provide a balance of images or information about people, representing various demographic and physical characteristics. (2 points)	 Are depictions of demographics or physical characteristics portrayed positively across the curriculum? 	 Provide positive, diverse, and balanced depictions of individuals of different genders, races, ethnicities, and other physical characteristics engaging in and able to do the work. 	0 1 2

30. Materials provide guidance to encourage teachers to draw upon student home language to facilitate learning. (2 points)	Do the materials include instruction on how to garner information of a student's home language that will aid in learning?	 Provide suggestions and strategies for how to allow the use of the home language to support students in learning technology and computer science. Present multilingualism as an asset in reading and learning. 	0 1 2
3p. Materials provide guidance to encourage teachers to draw upon student cultural and social backgrounds to facilitate learning. (2 points)	How well do the materials connect to the students' funds of knowledge, culture, or community?	 Make connections to students' linguistic and cultural backgrounds to facilitate learning. Provide opportunities for students to feel acknowledged, e.g., asked to create personal problems based on customs of their own home culture. 	0 1 2
3q. Materials provide supports for different reading levels to ensure accessibility for students. (2 points)	How and where do the materials include specific supports or strategies to modify lessons or activities for students who read, write, speak, or listen below grade level?	 Provide tasks with multiple entry points. Use a variety of representations to engage students with grade-level or course-level content. Include pre-reading activities that utilize visuals to establish necessary background knowledge on new or unfamiliar themes or topics in an appropriate manner. 	0 1 2
	Meets: 15-18 points Partially Meets: 1	TOTAL SCORE CRITERION 3.3 0-14 points Does Not Meet: 0-9 points	
Criterion 3.4: INTENTIONAL DESIGN			
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
3r. Materials integrate technology such as interactive tools, virtual manipulatives/objects, and/ or dynamic software in ways that engage students in the grade-level/series standards, when applicable. (2 points)	Do the materials integrate digital technology and interactive tools in ways that support student engagement in content?	Connect and support the learning objectives.	0 1 2

3s. Materials include or reference digital technology that provides opportunities for teachers and/or students to collaborate with each other, when applicable. (2 points)	 Do the digital materials provide opportunities for teachers and/or students to collaborate with each other? 	Support collaboration between teacher to teacher, teacher to student, or student to student.		1	2	
3t. The visual design (whether in print or digital) supports students in engaging thoughtfully with the subject and is neither distracting nor chaotic. (2 points)	Does the visual design support student learning and engagement, without being visually distracting?	 Provide images, graphics, and models that support student learning and engagement. Provide images, graphics, and models that clearly communicate information or support student understanding of topics, text, or concepts. Provide organizational features (e.g., Table of Contents, glossary, index, internal references, table headers, captions, etc.) clearly and accurately. 	0	1	2	
3u. Materials provide teacher guidance for the use of embedded technology to support and enhance student learning, when applicable. (2 points)	 Do the materials provide teacher guidance for the use of embedded technology to support and enhance student learning? Are the materials compatible with different Learning Management Systems and easily integrated within? Is the digital material compatible with applicable browsers? Are materials compatible with the hardware used in the school or district, like computers, tablets, or other devices? 	 Include guidance on use with an LMS. Work with the applicable browser if it is web-based. Are designed to work seamlessly with computers, tablets, etc. in use in the school or district. 	0	1	2	
TOTAL SCORE CRITERION 3.4 Meets: 7-8 points Partially Meets: 5-6 points Does Not Meet: 0-4 points						

Gateway 3 Points AVAILABLE	Gateway 3 Points ACHIEVED	GATEWAY 3 RATING
46	Sum of Criterion 3.1, 3.2, 3.3, and 3.4 points	 ☐ Meets (score of 35-46 points) ☐ Partially Meets (score of 24-34 points) ☐ Does Not Meet (score of 0-23 points)

TOTAL SCORE (Gateway 1, 2, and 3)						
GATEWAY 1	GATEWAY 1 GATEWAY 2 GATEWAY 3 GRAND TOTAL					
of 18 points of 16 points of 46 points of 80 points						